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SUMMARY OF AMENDMENTS TO CLAIMS

Applicant has amended the claims to more particularly define the invention and to claim additional aspects and features of the invention disclosed in the specification. No new matter has been added.

DETAILED RESPONSE TO CLAIM REJECTIONS

Based on the following remarks, Applicant respectfully submits that the pending claims in this application are not anticipated under 35 U.S.C. § 102 or rendered obvious under 35 U.S.C. § 103.

Response To Claim Rejections - 35 U.S.C. § 102

The Examiner rejected claims 1-15, and 22-23 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,891,392 which issued to Monticello et al (Monticello). Monticello shows a ready-to-use aqueous composition for cleaning and disinfecting a surface having the following percentages by weight of constituents: "0.1-20% wt. of a C₁-C₆ monohydric alcohol; 1.0-10% wt. of a glycol ether or butoxypropanol or propoxypropanol; 0.1-12% wt. of a nonionic surfactant; 0.1-1.5% wt. of hydrogen peroxide; 0.1-7% wt. of citric acid; to 100% wt. water." See Col. 1, lines 40-51.

In this Official Action, the Examiner contends that with respect to claims 1, 6, and 11, Monticello "teaches the following: an apparatus (col. 4, lines 59-64), a method (columns 8-9), a composition (col. 1, lines 7-12), a flash vaporization component (col. 2, line 30), an effective amount of an antimicrobial agent (col. 1, line 48), and applying a liquid flash-dry disinfectant composition as an aerosol spray onto a surface (col. 7, lines

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9-11 and lines 20-23). Since the composition includes ethanol and hydrogen then it is an inherent property of the composition to leave an essentially dry surface having antimicrobial agent deposited thereon.

With respect to claims 2, 7, and 12, the Examiner contends that Monticello teaches that the composition consists of flash vaporization component and an antimicrobial agent (col. 1, lines 39-48).

With respect to claims 3-4, 8-9, 13-14, and 22-23, the Examiner contends that Monticello discloses the following: "the antimicrobial agent includes hydrogen peroxide, and the flash vaporization component includes ethanol (col. 1, lines 39-48)."

With respect to claims 5, 10, and 15, the Examiner contends that Monticello discloses the following: "the flash-dry disinfectant composition includes 3 to 30% by volume hydrogen peroxide (col. 4, lines 15-16 and table 1), 10 to 85% by volume of ethanol (col. 1, line 44), and 10-65% by volume of water (col. 1, line 50)."

For a claimed invention to be anticipated by a single prior art reference pursuant to 35 U.S.C. § 102(b), the reference must teach every aspect of the claimed invention either explicitly or impliedly. In other words, "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." See Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." See Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicant respectfully submits that Monticello fails to disclose, either expressly or inherently, each and every element set forth in the pending claims.

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The pending claims have been amended to recite, *inter alia*, that the flash-dry disinfectant component comprises 3 to ²30% by volume of an antimicrobial agent, 10 to 50 % by volume of an alkanol of formula ROH wherein R is a group containing 1 to 6 carbon atoms and 10 to 65 % by volume of water. This language distinguishes over Monticello under 35 U.S.C. §102 because in contrast to the claimed invention, the composition of Monticello does not comprise 3 to 30% by volume of an antimicrobial agent. Instead, Monticello shows compositions having 0.1-1.5 % wt. of hydrogen peroxide as the selected antimicrobial agent. As can be seen from the following % by volume - % by weight Conversion Table, the claimed invention falls outside of the maximum % by volume of hydrogen peroxide range taught by Monticello. That is, the pending claims recite 4.55-43.11 % wt. of antimicrobial agent (hydrogen peroxide), which is a substantially higher concentration than Monticello's 0.1-1.5 % wt. of hydrogen peroxide.

Conversion Table

Claim Elements	% vol.	Density at 20° C	% wt.
Antimicrobial Agent: -Hydrogen Peroxide (H ₂ O ₂)	3-30	1.45 g/ml	4.55-43.11
Flash Vaporization Component: -Ethanol	10-85	0.79 g/ml	6.36-79.47
Water	10-65	1.00 g/ml	9.91-68.69

ASSUMPTIONS:

- * All numbers are rounded up to the second decimal place.
- * The lower limit of a component is calculated with the assumption that the higher density one of the other two components is present at highest possible amount.
- * The upper limit of a component is calculated with the assumption that the lower density one of the other two components is present at highest possible amount.

Moreover, Monticello expressly discourages the use of higher concentrations of hydrogen peroxide as the antimicrobial agent stating, "higher concentrations of hydrogen

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peroxide should be avoided, as it has been observed that such higher levels will cause an increase in skin whitening and is therefore not desirable." See Col. 4, lines 16-19.

Based on the above remarks, Applicants respectfully submit that the claimed invention is novel over the applied prior art. More particularly, pending claims 1-15, and 22-23 recite limitations that distinguish over Monticello. Accordingly, the rejection under 35 U.S.C. §102(e) is overcome and withdrawal thereof is respectfully requested.

Response To Claim Rejections - 35 U.S.C. § 103

The Examiner rejected claims 16-21 under 35 U.S.C. 103(a) as being unpatentable over Monticello in view of U.S. Patent No. 5,665, 332 which issued to Mundschenk et al (Mundschenk). Specifically, the Examiner contends the following: "with respect to claims 16-21; the limitations in those claims where addressed above with regard to claims 2-3, and 4-5. However, with respect to claims 16 and 17; Monticello et al fails to disclose a dispenser with two separate chambers. With respect to claims 16-17; Mundschenk et al, which is in the art of dispensing a disinfectant composition onto a surface (col.3, lines 10-17) using hydrogen peroxide (col. 3, line 18) and an alcohol (col.5, lines 18-19), discloses that the dispenser includes multiple containers (col. 4, lines 50-67). Furthermore, the dispenser includes mixing means (col 4, line 56 and line 62) wherein the various components are mixed just prior to application of the composition onto a surface. Thus, the choice of using a single container dispenser as taught by Monticello et al (col. 4, lines 59-62) or a multi-container dispenser is well known and further is well within the purview of the skilled artisan (Mundschenk et al, col.4, lines 65-67)."

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To establish a prima facie case of obviousness, three basic criteria must be met.

First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art references (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on an applicant's disclosure in the specification. See In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

Applicant respectfully submits that the combination of Monticello and Mundschenk (whether or not they can be combined), fail to teach or suggest, either expressly or inherently, all the limitations of the claims 16-21.

As previously indicated, the pending claims have been amended to recite that the flash-dry disinfectant component comprises 3 to 30% by volume of an antimicrobial agent, 10 to 50 % by volume of an alkanol of formula ROH wherein R is a group containing 1 to 6 carbon atoms and 10 to 65 % by volume of water. Applicants have already shown that Monticello does not comprise "3 to 30% by volume of an antimicrobial agent" and teaches away from compositions having such high concentration levels of antimicrobial agent. Accordingly, even if combined, Monticello and Mundschenk would not meet the claims at issue. This distinction is respectfully submitted to be of patentable merit under 35 U.S.C. §103.

Applicant respectfully further submits that claims 16-21 also distinguish over the applied prior art because it would not have been obvious to a skilled artisan in the

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pertinent art to separate the antimicrobial and flash vaporization components into two chambers. Prior to utilization, highly reactive agents are typically kept apart to ensure effectiveness. The antimicrobial and flash vaporization components used in the claimed invention (such as ethanol and hydrogen peroxide, respectfully) are not highly reactive. Therefore it would not have been obvious to separate them in the claimed manner. This distinction is also respectfully submitted to be of patentable merit under 35 U.S.C. §103.

Based on the above remarks, Applicants respectfully submit that the claimed invention is unobvious over the applied prior art. More particularly, pending claims 16-21 recite limitations that distinguish over the combination of Monticello and Mundschenk (whether or not they can be combined) under 35 U.S.C. §103. Accordingly, the rejection under 35 U.S.C. § 103(a) is overcome and withdrawal thereof is respectfully requested.

RESPONSE TO NON-APPLIED ART

Finally, the Examiner cited certain prior art made of record and not relied upon but considered pertinent to the Applicant's disclosure. Applicant has reviewed the cited art and respectfully submits that the claimed invention is novel and unobvious over this art.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance and accordingly, allowance of the application is respectfully requested.

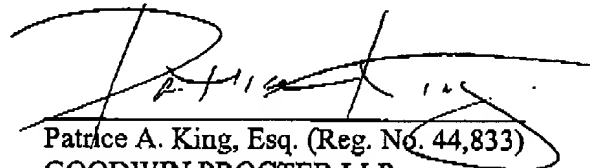
Should the Examiner require or consider it advisable that the specification, claims and/or drawings be further amended or corrected in formal respects in order to place the

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case in condition for final allowance, then it is respectfully requested that such amendment or correction be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

The Commissioner is authorized to charge any required fees, including any extension and/or excess claim fees, any additional fees, or credit any overpayment to Deposit Account 06-0923. Applicant claims small entity status. See 37 C.F.R. 1.27.

Respectfully submitted for Applicants,



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MARKED UP VERSION OF CLAIMS

1. (AMENDED) In an aerosol spray apparatus, for applying an antimicrobial agent to a surface to be disinfected, comprising an aerosol spray nozzle coupled to a first container [means] comprising a gas propellant and second container [means] for containing a liquid disinfectant composition able to be sprayed from the apparatus, said aerosol apparatus being configured for dispensing said disinfectant composition through said spray nozzle, [under pressure due to the presence of the gas propellant means, as an aerosol spray onto said surface to be disinfected,]

the improvement wherein the liquid disinfectant composition is a liquid flash-dry disinfectant composition comprising [a flash vaporisation component and an effective amount of an antimicrobial agent, said flash vaporisation component being able, once the flash-dry disinfectant composition is sprayed from the apparatus, to flash vaporise so as to leave an essentially dry surface having antimicrobial agent deposited thereon] 3 to 30% by volume of said antimicrobial agent, 10 to 85% by volume of a flash vaporization component and 10 to 65 % by volume of water, said flash vaporization component being able, once the flash-dry disinfectant composition is sprayed from the apparatus, to flash vaporize said flash-dry disinfectant composition thereby providing rapid and effective disinfecting action.

6. (AMENDED) A liquid flash-dry aerosol disinfectant composition comprising [a flash vaporisation component and an effective amount of an antimicrobial agent, said flash vaporisation component being able, once the flash-dry disinfectant composition is

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sprayed in aerosol form onto a surface, to flash vaporise so as to leave an essentially dry surface having

antimicrobial agent deposited thereon] 3 to 30% by volume of an antimicrobial agent, 10 to 85% by volume of a flash vaporization component and 10 to 65 % by volume of water, said flash vaporization component being able, once the flash-dry disinfectant composition is sprayed from the apparatus, to flash vaporize said flash-dry disinfectant composition thereby providing rapid and effective disinfecting action.

11. (AMENDED) A method for disinfecting a surface comprising applying a liquid flash-dry disinfectant composition as an aerosol spray onto such surface, [said liquid flash-dry aerosol disinfectant composition comprising a flash vaporisation component and an effective amount of an antimicrobial agent, said flash vaporisation component being able, once the flash-dry disinfectant composition is sprayed in aerosol form onto a surface, to flash vaporise so as to leave an essentially dry surface having antimicrobial agent deposited thereon] said liquid flash-dry aerosol disinfectant composition comprising 3 to 30% by volume of said antimicrobial agent, 10 to 85% by volume of a flash vaporization component and 10 to 65 % by volume of water, said flash vaporization component being able, once the flash-dry disinfectant composition is sprayed from the apparatus, to flash vaporize said flash-dry disinfectant composition thereby providing rapid and effective disinfecting action.

17. (AMENDED) In an aerosol spray apparatus, for applying an antimicrobial agent to a surface to be disinfected, comprising an aerosol spray nozzle coupled to a container

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[means] comprising a gas propellant [means], said aerosol apparatus being configured for dispensing a liquid disinfectant composition through said spray nozzle, [under pressure due to the presence of the gas propellant [means], as an aerosol spray onto said surface to be disinfected,] the improvement wherein said liquid disinfectant composition is a liquid flash-dry disinfectant composition able to be sprayed from said apparatus, said liquid flash-dry aerosol disinfectant composition [said liquid flash-dry disinfectant composition comprising a flash vaporisation component and an effective amount of an antimicrobial agent element, said flash vaporisation component being able, once the flashdry disinfectant composition is sprayed from the apparatus, to flash vaporise so as to leave an essentially dry surface having antimicrobial agent deposited thereon] comprising 3 to 30% by volume of said antimicrobial agent, 10 to 85% by volume of a flash vaporization component and 10 to 65 % by volume of water, said flash vaporization component being able, once the flash-dry disinfectant composition is sprayed from the apparatus, to flash vaporize said flash-dry disinfectant composition thereby providing rapid and effective disinfecting action., wherein said container [means] comprises a first sub-container [means] containing said antimicrobial agent and a second sub-container [means] containing said flash vaporiz[s]ation component and wherein said aerosol spray apparatus comprises a mixer [mixing means] for mixing said antimicrobial agent and said flash vaporiz[s]ation component together prior to dispensing said liquid flash-dry disinfectant composition through said spray nozzle.